

ABSTRACT

A method to convert seismic traces to petrophysical properties is disclosed. One embodiment of the method comprises (a) deriving a combined log seismic response from at least one petrophysical log from a well and at least one seismic trace substantially near the well, (b) convolving the combined log seismic response filter with each seismic trace to convert the seismic traces to logs of petrophysical properties, (c) outputting the petrophysical properties. Equations to derive the combined log seismic response and to convolve the combined seismic response filter are disclosed. The method may be used to output the petrophysical data as a two-dimensional cross-section or as a three-dimensional volume cube.